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THE COLMAN CITRANGE.¹

The Colman citrange is a hybrid of the Trifoliate orange with pollen of the common sweet orange and is closely related to the Morton and Willits, having developed from another seed of the same hybrid fruit. This new citrange has been named the *Colman* in recognition of the valuable services to agriculture and to this Department of Hon. Norman J. Colman, under whose administration, as Commissioner of Agriculture, the agricultural work of the Government was organized as a separate Department. The Colman is a remarkable hybrid, having fruits as large as the ordinary orange and of fine appearance. It is very different in character from any other of the citranges and is easily recognizable.

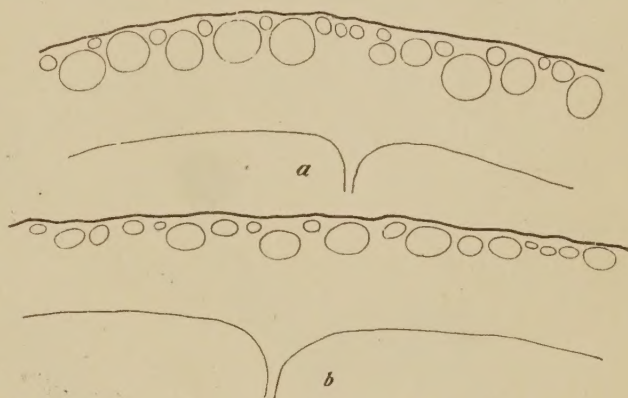


FIG. 1.—*a*, Section of the skin of the Savage citrange, showing the shape and arrangement of the oil glands; *b*, section of the skin of the Colman citrange, showing the shape and arrangement of the oil glands. (Twice natural size.)

DESCRIPTION OF FRUIT AND TREE.—Fruit compressed spherical, frequently rather one sided or oblique, large but rather smaller than the Morton, $2\frac{1}{4}$ to $2\frac{3}{4}$ inches high and from $2\frac{3}{4}$ to $3\frac{3}{4}$ inches in diameter; color light orange or lemon yellow (by Ridgway's standards Colman is between saffron yellow and Indian yellow); surface mainly very smooth, slightly roughened as in ordinary orange by slight depressions over some of the large oil glands, covered with numerous short, stiff, colorless hairs, occasionally with a few slight furrows near base; weight, heavy for size of fruit, from 6 to 9 ounces, usually averaging about 8 ounces, somewhat lighter than water; calyx persistent but dried up and inconspicuous as in case of ordinary orange; rind medium thin, one-eighth to three-sixteenths of an inch in thickness, adhering to fruit about as in the ordinary Florida orange, being removed with moderate ease; in taste bitter and disagreeable, intermediate between the ordinary and Trifoliate orange; oil glands small and comparatively few, spherical or oblate-spherical, with major axis parallel to surface, smaller and of different shape from those of the Morton, Savage, and other citranges, and closer to the surface (fig. 1, *b*); pulp translucent, light lemon yellow (by Ridgway's standards wax yellow), lighter than the pulp of Morton;

¹ Reprinted, with slight changes, from "New Citrus and Pineapple Productions of the Department of Agriculture," by Herbert J. Webber, Yearbook of the Department of Agriculture, 1906, pp. 331-333, where a colored plate is also given.

pulp vesicles longer and smaller in diameter than those of the ordinary orange; tender; segments 10 to 14, separating membranes somewhat thicker than in good ordinary oranges, with pronounced bitterness derived from the *Trifoliata*; texture of fruit tender, very juicy; axis small, one-fourth to one-half an inch in diameter; flavor a sprightly bitter acid, nearly as sour as a lemon and with a peculiar stimulating bitter taste; almost totally seedless, averaging 1 seed to 6 fruits; aroma very pleasant and pronounced, differing from any other citrus fruit, suggesting *Trifoliata*, but milder; tree similar to *Trifoliata* in shape, but with denser foliage, evergreen or semi-evergreen, thorny, of medium height, and



FIG. 2.—Branch of the Colman citrange. (One-half natural size.)

shapely; fruit stems large and stiff, in many cases holding fruit erect; leaves in general trifoliolate, but frequently unifoliolate, nearly twice the size of those of the *Trifoliata* orange; season of maturity medium early, from middle of September to last of November.

The Colman citrange is an exceedingly interesting hybrid in its combination of parental characters. It is the only one of the citranges thus far secured which has inherited in any marked degree the fuzzy fruit character of the *Trifoliata* orange. The fuzz on the Colman fruit, however, in no way detracts from its good appearance and is thus not a detrimental character. The foliage is in general slightly larger than any of the other *Trifoliata* × orange hybrids which have been secured

and is nearly half unifoliolate, like the orange. In foliage characters, therefore, the Colman is more like the common orange than any of the other citranges. In odor and flavor it is nearly intermediate between the two parents. In shape and arrangement of oil glands it is different from either parent or from any other citrange which the writer has examined. While the majority of the Colman fruits show very little indication of furrows, some fruits, as, for instance, one shown in figure 2, have pronounced furrows radiating from the base and reaching nearly to the apex of the fruit. The tree of the Colman is very thorny, but the writer has observed many branches having the thorns almost entirely suppressed, and it is highly probable that the thorns may be bred out, as in the case of varieties of the common orange, by selecting buds for propagation from such thornless branches. The almost total seedlessness of this variety is somewhat remarkable and greatly adds to the value of the fruit. A record of 102 fruits examined in the last two years shows an average of only 1 seed to 6 fruits.

The Colman is primarily recommended for use in making citrangeade. It makes a rich, orange-colored ade of high quality, with a dash of bitterness which is very attractive to some palates. This quality, like the bitter principle of the grapefruit, is doubtless stimulating and healthful. The juiciness of this variety, its seedlessness, and its large size specially fit it for use as an ade fruit. It also makes a very fair marmalade, and other uses for the fruit will doubtless be found. The tree is of fine appearance and well worthy of cultivation as a lawn tree, aside from the value of its fruit.

Approved:

B. T. GALLOWAY,
Chief of Bureau.

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